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SALAZAR, Antonlo, E. [VE/NL]; Prof . Holstlaan
6, NL-5656 AA Eindhoven (NL).

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(74) Agent: **GROENENDAAL, Antonius, W., M.**; Philips
Intellectual Property & Standards, Prof. Holstlaan 6,
NL-5656 AA Eindhoven (NL).

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(71) Applicant (*for all designated States except US*): **KONIN-
KLIJKE PHILIPS ELECTRONICS N.V.** [NL/NL];
Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

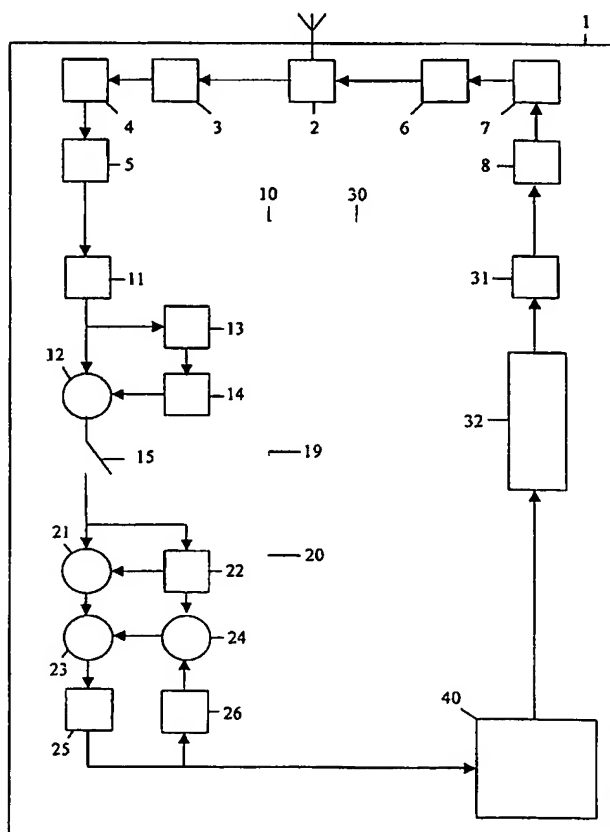
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(72) Inventor; and

(75) Inventor/Applicant (*for US only*): **SALLOUM**

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(54) Title: DIFFERENTIAL DECODER FOLLOWED BY NON-LINEAR COMPENSATOR



(57) Abstract: Receivers comprising (differential-quadrature-)phase-shift-keying demodulators (4) and differential detectors (10) consisting of decoders (19) are provided with non-linear compensators (20) for compensating decoder output signals for (parts of) interference terms, to improve the decoding process and to reduce the number of incorrect decisions. The non-linear compensators (20) comprise channel estimators (22) for estimating coefficients of terms of decoder output signals and removers (21,23) for removing terms of said decoder output signals. The receiver is designed for a Bluetooth environment. In the decoder output signal $u_k = Ab_k + Bb_{k-1} + Cb_{k+1} + Db_k^* + Eb_{k-1}b_k + Fb_kb_{k+1} + Gb_{k-1}b_{k+1} + H$, removers remove the H-term and the B-term, to reduce the complexity of extracting b_k from u_k . Slicers slice the compensated decoder output signals to further compensate said decoder output signals such that the possible values of decoder output signals can be better distinguished from each other.

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